

CLAIMS

What is claimed as invention is:

1. A power saving auto-off circuit for a wireless transmitter for an audio source, said
5 auto-off circuit comprising:
- a field effect transistor (FET) adapted to pinch off charge carriers when said auto-off circuit is in an "off" state;
- a capacitor connected to said FET and adapted to be charged and discharged, and
if not discharged will charge to a pre-determined threshold causing said FET to pinch off;
- 10 a comparator connected to said capacitor and having an open drain output and an
input, said input adapted to be dropped in value below a pre-determined threshold limit when
presented with an audio peak, and wherein said drop in value causes said capacitor to discharge;
- regulator means for producing an output when supplied with power, said regulator
means connected to said comparator and enabling said comparator output to discharge said
15 capacitor; and
- switch means connected to said capacitor and adapted to discharge said capacitor
when activated to cause said FET to supply power to said regulator..

2. The power saving auto-off circuit for a wireless transmitter of claim 1 wherein said
20 switch means comprises a momentary contact switch.

3. The power saving auto-off circuit for a wireless transmitter of claim 1 wherein the wireless transmitter includes an audio plug adapted for mating with an output jack of an audio source.

5 4. The power saving auto-off circuit for a wireless transmitter of claim 3 wherein said audio source is selected from the group consisting of a portable stereo radio, cassette player, CD player, and MP3 player.

10 5. The power saving auto-off circuit for a wireless transmitter of claim 1 wherein said capacitor is connected to a battery.

6. The power saving auto-off circuit for a wireless transmitter of claim 5 wherein said capacitor is charged to battery voltage when said circuit is in an "off" state.

15 7. The power saving auto-off circuit for a wireless transmitter of claim 5 wherein said capacitor accumulates charge in a absence of audio pulses.

20 8. The power saving auto-off circuit for a wireless transmitter of claim 5 wherein said comparator has a polarity, and said polarity is reversed to sense positive going peaks to discharge said capacitor.

9. A method for automatically turning off a wireless transmitter for an audio source when audio pulses cease for a period of time, said method comprising the steps of:

pinching off charge carriers in a field effect transistor (FET) when said circuit is in an "off" state;

5 permitting a capacitor to charge to a pre-determined threshold to cause said FET to pinchoff;

dropping a comparator input in value below a pre-determined threshold limit when presented with an audio peak, wherein said drop in value causes said capacitor to discharge, and maintaining the comparator input in value above the pre-determined threshold
10 limit when audio pulses are not presented for a period of time;

producing an output at a regulator when supplied with power and enabling said comparator output to discharge said capacitor; and

discharging said capacitor via a switch when activated and causing said FET to supply power to said regulator.

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10. The method for automatically turning off a wireless transmitter for an audio source of claim 9 further including the step of:

providing a momentary contact switch to discharge said capacitor.

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11. The method for automatically turning off a wireless transmitter for an audio source of claim 9 further including the step of:

providing an audio plug adapted for mating with an output jack of an audio source.

12. The method for automatically turning off a wireless transmitter for an audio source of claim 9 further including the step of:

connecting said capacitor to a battery.

13. The method for automatically turning off a wireless transmitter for an audio source of claim 12 further including the step of:

charging said capacitor to battery voltage when said circuit is in an "off" state.

14. The method for automatically turning off a wireless transmitter for an audio source of claim 12 further including the step of:

accumulating charge in said capacitor in the absence of audio pulses.

15. The method for automatically turning off a wireless transmitter for an audio source of claim 9 further including the step of:

reversing the polarity of said comparator to sense positive going peaks to discharge said capacitor.